AD-A085 529 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
12822A LANCE MISSILE NUMBER 4362, ROUND NUMBER 340-ECL, 2 MAY 1--ETC(U)
MAY 80

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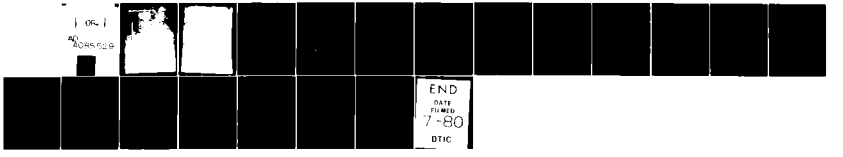

REPORT DOCUMENTATION PAGE

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18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

20 ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of the 12822A LANCE, Missile No. 4362, Round No. 346-ECL, are presented in tabular form.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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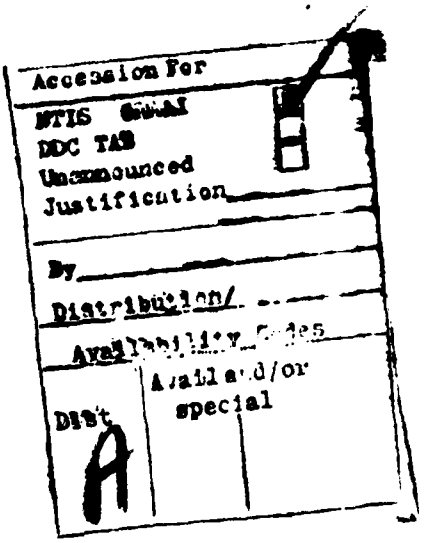

INTRODUCTION

12822A LANCE _____, Missile Number 4362 _____, [illegible] 346-ECL _____, was launched from Red Rio _____, White Sands Missile Range (WSMR), New Mexico, at 0809 MDT _____ on 02 May 1980 _____. The scheduled launch time was 0800 MDT _____.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team. Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

   a. Surface

      (1) Standard surface observations to include pressure, temperature (^{o}C), relative humidity, dew point (^{o}C), density (gm/m^{3}), Wind direction and speed, and cloud cover were made at the Red Rio _____ Met Site at T-0 minutes.

      (2) **Monitor of wind speed and direction from one anemometer was also provided in the launch control room.**

   b. Upper Air

      (1) Low level wind data were obtained from PAPIS T-9 pibal observation at:

SITE AND ALTITUDE

NOT AVAILABLE.

      (2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to as high as possible feet in 500-feet increments.

SITE AND TIME

RED RIO 0800 MDT

JALLEN 0830 MDT

TABLE 1. SURFACE OBSERVATION TAKEN AT 0800 MDT, 2 May 1980, at Red Rio, 12822A LANCE, Missile No. 4362, Round No. 346-ECL.

ELEVATION	6305	FT/MSL
PRESSURE	810.4	MBS
TEMPERATURE	8.3	^{o}C
RELATIVE HUMIDITY	82	
DEW POINT	5.4	^{o}C
DENSITY	998	GM/M^3
WIND SPEED	08	KTS
WIND DIRECTION	360	DEGREES
CLOUD COVER	4 C1	

STATION ALTITUDE 6331.86 FEET MSL
2 MAY 60 0800 MDT
ASCENSION NO. 3

SIGNIFICANT LEVEL DATA
1230350003
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 2.

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
810.4	6331.9	8.3	5.4	82.0
799.8	6689.2	7.6	1.0	63.0
749.0	8469.0	5.5	-2.8	55.0
700.0	10263.2	.9	-6.0	60.0
617.2	13543.5	-6.7	-12.2	65.0
597.8	14359.7	-9.5	-10.3	94.0
557.0	16147.5	-12.0	-28.4	24.0
535.8	17121.1	-13.3	-35.6	13.0
500.0	18840.6	-16.7	-35.3	18.0
438.6	22037.9	-23.0	-40.6	18.0
431.8	22414.5	-23.0	-40.1	19.0
400.0	24242.0	-27.5	-44.4	18.0
377.4	25609.6	-30.8	-46.3	20.0
333.4	28462.5	-38.0	-44.3	51.0
321.4	29290.2	-39.9	-43.6	66.0
300.0	30828.7	-43.3	-47.3	64.0
286.2	31867.5	-45.5	-50.4	57.0
250.0	34812.5	-49.2		
238.4	35836.3	-50.3		
228.2	36778.5	-49.3		
223.2	37255.9	-50.3		
213.6	38203.3	-49.3		
200.0	39623.7	-49.5		
178.0	42134.6	-50.3		
159.0	45763.8	-56.7		
142.0	46904.1	-58.7		
114.2	51406.6	-59.7		
104.6	53206.0	-62.4		
100.0	54122.3	-62.2		
89.8	56322.0	-61.0		
70.0	61423.7	-61.6		
59.3	64800.2	-63.8		
50.0	68280.2	-60.8		
39.4	73226.7	-56.5		
30.4	78681.1	-55.4		

STATION ALTITUDE 6331.86 FEET MSL
2 MAY 60 0800 MDT
ASCENSION NO. 3

UPPER AIR DATA
1230350003
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 3.

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
6331.9	810.4	8.3	5.4	82.0	996.9	654.9	300.0	8.0	1.000286
6500.0	805.4	8.0	3.4	73.1	994.4	654.4	357.7	6.8	1.000259
7000.0	790.6	7.2	.4	61.6	979.4	653.3	342.2	3.6	1.000248
7500.0	776.1	6.6	-.7	59.3	963.6	652.6	209.5	1.9	1.000243
8000.0	761.9	6.0	-1.8	57.1	948.1	651.8	219.3	4.3	1.000237
8500.0	747.9	5.4	-2.9	55.1	933.0	651.0	233.9	4.8	1.000232
9000.0	734.0	4.1	-3.7	56.5	920.0	649.5	241.9	5.0	1.000228
9500.0	720.3	2.8	-4.6	57.9	907.1	648.0	239.5	4.1	1.000224
10000.0	706.9	1.6	-5.5	59.3	894.5	646.4	240.8	3.4	1.000220
10500.0	693.7	.4	-6.4	60.4	881.7	644.9	248.0	2.9	1.000216
11000.0	680.5	-.8	-7.3	61.1	868.7	643.5	268.6	3.6	1.000212
11500.0	667.6	-2.0	-8.3	61.9	856.0	642.1	283.4	5.2	1.000208
12000.0	654.9	-3.1	-9.2	62.6	843.4	640.7	291.6	7.5	1.000204
12500.0	642.4	-4.3	-10.2	63.4	831.0	639.3	298.6	10.0	1.000200
13000.0	630.2	-5.4	-11.1	64.2	818.8	637.9	300.8	12.5	1.000196
13500.0	618.2	-6.6	-12.1	64.9	806.8	636.5	313.4	15.1	1.000193
14000.0	606.3	-8.3	-10.9	81.2	796.0	634.8	317.9	17.3	1.000192
▶ 14500.0	594.5	-9.7	-11.2	88.5	784.8	633.9	319.6	18.1	1.000189
15000.0	582.9	-10.4	-15.0	68.9	771.8	631.9	319.7	17.3	1.000182
15500.0	571.4	-11.1	-19.6	49.4	759.0	630.9	319.6	15.8	1.000176
16000.0	560.3	-11.8	-25.9	29.8	746.4	630.0	319.6	14.1	1.000170
16500.0	549.2	-12.5	-30.7	20.0	733.7	628.1	312.2	13.2	1.000166
17000.0	538.4	-13.1	-34.6	14.4	721.2	626.3	303.5	12.7	1.000162
17500.0	527.7	-14.0	-35.6	14.1	709.4	624.2	300.8	13.0	1.000160
18000.0	517.2	-15.0	-35.4	15.6	697.9	622.0	299.1	13.5	1.000157
18500.0	506.9	-16.0	-35.3	17.0	686.6	619.8	304.8	14.6	1.000155
19000.0	496.7	-17.0	-35.6	18.0	675.5	617.6	308.9	15.7	1.000152
19500.0	486.7	-18.0	-36.4	18.0	664.3	615.4	310.4	16.9	1.000150
20000.0	476.8	-19.0	-37.3	18.0	653.4	613.1	311.4	18.2	1.000147
20500.0	467.1	-20.0	-38.1	18.0	642.6	610.9	312.0	19.6	1.000144
21000.0	457.7	-21.0	-38.9	18.0	632.1	608.7	311.4	21.1	1.000142
21500.0	448.4	-21.9	-39.7	18.0	621.7	606.5	310.1	22.5	1.000140
22000.0	439.3	-22.9	-40.6	18.0	611.5	604.3	307.1	24.4	1.000137
22500.0	430.3	-23.2	-40.3	19.0	599.6	602.0	304.2	26.6	1.000135
23000.0	421.3	-24.4	-41.5	18.7	590.1	599.4	302.5	28.2	1.000132
23500.0	412.6	-25.7	-42.7	18.4	580.0	596.9	301.1	29.9	1.000130
24000.0	404.1	-26.9	-43.9	18.1	571.0	594.4	300.4	31.7	1.000128
24500.0	395.6	-28.1	-44.8	18.4	562.4	591.9	300.3	33.7	1.000126
25000.0	387.3	-29.3	-45.4	19.1	553.3	589.3	300.5	36.0	1.000124
25500.0	379.2	-30.5	-46.1	19.8	544.4	586.8	302.0	38.5	1.000122

STATION ALTITUDE 6531.96 FEET MSL
2 MAY 80 0800 MDT
ASCENSION NO. 3

UPPER AIR DATA
1230350003
RELEASE

GEODETIC COORDINATES
33.77656 LAT DEG
108.24993 LON DEG

TABLE 3 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN.	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
26000.0	371.1	-31.8	-45.4	24.2	535.5	615.3	303.8	41.0	1.000120
26500.0	363.1	-33.0	-44.7	29.7	526.7	613.7	304.2	43.4	1.000118
27000.0	355.3	-34.3	-44.3	35.1	518.1	612.1	304.5	45.8	1.000116
27500.0	347.6	-35.6	-44.2	40.5	509.7	610.5	303.2	48.3	1.000114
28000.0	340.2	-36.8	-44.2	46.0	501.4	608.9	302.1	51.0	1.000112
28500.0	332.8	-38.1	-44.3	51.7	493.2	607.3	301.1	54.0	1.000111
29000.0	325.6	-39.2	-43.9	60.7	484.6	605.9	300.1	57.1	1.000109
29500.0	318.4	-40.4	-44.3	65.7	476.4	604.4	299.2	60.1	1.000107
30000.0	311.3	-41.5	-45.4	65.1	468.1	603.0	298.1	63.8	1.000105
30500.0	304.4	-42.6	-46.6	64.4	459.9	601.6	296.9	66.3	1.000103
31000.0	297.7	-43.7	-47.8	62.8	451.8	600.2	296.6	73.3	1.000101
31500.0	291.0	-44.7	-49.3	59.5	443.8	598.8	296.6	76.6	1.000099
32000.0	284.5	-45.7	-51.0	54.4**	435.8	597.6	297.6	84.3	1.000097
32500.0	278.0	-46.3	-53.2	44.6**	426.9	596.8	293.6	90.2	1.000095
33000.0	271.7	-46.9	-55.8	35.1**	418.4	596.0	298.7	98.0	1.000093
33500.0	265.5	-47.6	-58.9	25.4**	410.0	595.2	298.5	105.7	1.000091
34000.0	259.5	-48.2	-63.1	15.7**	401.8	594.5	298.1	111.3	1.000090
34500.0	253.6	-48.8	-70.4	6.0**	393.8	593.5	297.6	114.6	1.000088
35000.0	247.8	-49.4			385.9	592.7	297.1	114.5	1.000086
35500.0	242.1	-49.9			377.9	592.0	296.6	114.2	1.000084
36000.0	236.6	-50.1			369.6	591.8	296.4	113.7	1.000082
36500.0	231.2	-49.6			360.2	592.5	296.6	113.5	1.000080
37000.0	225.9	-49.8			352.2	592.3	296.1	113.7	1.000078
37500.0	220.7	-50.0			344.6	591.9	295.9	113.1	1.000077
38000.0	215.6	-49.5			335.9	592.6	300.5	111.5	1.000075
38500.0	210.7	-49.3			327.9	592.8	301.5	109.3	1.000073
39000.0	205.9	-49.4			320.5	592.7	302.0	106.1	1.000071
39500.0	201.1	-49.5			313.3	592.6	302.4	102.9	1.000070
40000.0	196.5	-49.6			306.3	592.5	302.6	99.7	1.000068
40500.0	192.0	-49.8			299.5	592.2	302.9	96.7	1.000067
41000.0	187.6	-49.9			292.8	592.0	303.0	94.9	1.000065
41500.0	183.3	-50.1			286.3	591.8	303.2	93.0	1.000064
42000.0	179.1	-50.3			279.9	591.6	303.3	91.0	1.000062
42500.0	175.0	-50.9			274.3	590.7	303.3	88.9	1.000061
43000.0	170.9	-51.8			269.0	589.6	303.0	87.5	1.000060
43500.0	166.9	-52.7			263.8	588.4	302.5	86.3	1.000059
44000.0	163.0	-53.6			258.6	587.3	302.1	85.7	1.000058
44500.0	159.2	-54.5			253.6	586.1	301.6	85.6	1.000056
45000.0	155.5	-55.4			248.7	584.9	301.1	85.6	1.000055
45500.0	151.9	-56.2			243.9	583.8	300.6	85.6	1.000054

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 6331.86 FEET MSL
2 MAY 80 0800 MDT
ASCENSION NO. 5

UPPER AIR DATA
1230350003
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 3. (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
46000.0	148.3	-57.1			239.1	572.6	300.4	65.2	1.000053
46500.0	144.8	-58.0			234.4	571.4	299.7	84.4	1.000052
47000.0	141.3	-58.7			229.6	570.5	296.9	83.6	1.000051
47500.0	136.0	-58.8			224.3	570.3	298.3	80.9	1.000050
48000.0	134.7	-58.9			219.0	570.2	297.7	77.8	1.000049
48500.0	131.4	-59.1			213.9	570.0	297.7	74.7	1.000048
49000.0	128.3	-59.2			208.9	569.9	296.3	71.8	1.000047
49500.0	125.2	-59.3			204.0	569.7	299.5	68.6	1.000045
50000.0	122.2	-59.4			199.2	569.6	302.1	64.7	1.000044
50500.0	119.3	-59.5			194.6	569.4	305.0	61.0	1.000043
51000.0	116.5	-59.6			190.0	569.3	306.6	52.3	1.000042
51500.0	113.7	-59.8			185.7	569.0	313.6	43.9	1.000041
52000.0	110.9	-60.6			181.8	568.0	316.2	37.5	1.000040
52500.0	108.3	-61.3			178.1	567.0	317.1	32.0	1.000040
53000.0	105.7	-62.1			174.4	566.0	316.9	28.1	1.000039
53500.0	103.1	-62.3			170.4	565.6	313.8	27.4	1.000038
54000.0	100.6	-62.2			166.2	565.8	310.5	26.9	1.000037
54500.0	98.2	-62.0			162.0	566.1	311.7	22.0	1.000036
55000.0	95.8	-61.7			157.8	566.5	313.8	17.0	1.000035
55500.0	93.5	-61.4			153.8	566.8	317.0	12.3	1.000034
56000.0	91.2	-61.2			149.9	567.2	323.0	7.9	1.000033
56500.0	89.0	-61.0			146.2	567.4	332.6	4.7	1.000033
57000.0	86.9	-61.1			142.7	567.3	342.2	5.1	1.000032
57500.0	84.8	-61.1			139.3	567.3	313.5	5.6	1.000031
58000.0	82.7	-61.2			136.0	567.2	306.1	6.3	1.000030
58500.0	80.7	-61.3			132.7	567.1	300.2	7.2	1.000030
59000.0	78.8	-61.3			129.6	567.0	294.1	7.2	1.000029
59500.0	76.9	-61.4			126.5	566.9	286.2	6.7	1.000028
60000.0	75.0	-61.4			123.5	566.9	275.6	5.6	1.000027
60500.0	73.2	-61.5			120.5	566.8	240.7	3.5	1.000027
61000.0	71.5	-61.6			117.7	566.7	188.5	3.2	1.000026
61500.0	69.7	-61.6			114.9	566.6	132.8	6.1	1.000026
62000.0	68.0	-62.0			112.3	566.1	118.6	10.7	1.000025
62500.0	66.4	-62.3			109.7	565.7	108.9	14.5	1.000024
63000.0	64.8	-62.6			107.2	565.3	101.9	17.9	1.000024
63500.0	63.2	-63.0			104.8	564.8	98.2	20.5	1.000023
64000.0	61.7	-63.3			102.4	564.4	96.6	21.5	1.000023
64500.0	60.2	-63.6			100.0	563.9	95.9	22.5	1.000022
65000.0	58.7	-63.6			97.6	563.9	99.6	23.4	1.000022
65500.0	57.3	-63.2			95.1	564.5	103.1	24.4	1.000021

UPPER AIR DATA

STATION ALTITUDE 6331.86 FEET MSL
2 MAY 80 0800 MDT
ASCENSION NO. 3

1230350003
RED RIO
TABLE 3 (continued)

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
66000.0	55.9	-62.8			92.6	565.1	107.5	25.3	1.000021
66500.0	54.6	-62.3			90.2	565.6	111.4	26.3	1.000020
67000.0	53.2	-61.9			87.8	566.2	114.1	26.4	1.000020
67500.0	51.9	-61.5			85.5	566.8	115.7	25.5	1.000019
68000.0	50.7	-61.0			83.3	567.4	117.1	24.4	1.000019
68500.0	49.5	-60.6			81.1	568.0	116.7	22.5	1.000018
69000.0	48.3	-60.2			79.0	568.5	116.1	20.6	1.000018
69500.0	47.1	-59.7			77.0	569.1	116.2	18.6	1.000017
70000.0	46.0	-59.3			75.0	569.7	116.5	16.6	1.000017
70500.0	44.9	-58.9			73.0	570.3	116.6	14.1	1.000016
71000.0	43.9	-58.4			71.2	570.9	117.2	10.8	1.000016
71500.0	42.8	-58.0			69.3	571.4	117.9	7.5	1.000015
72000.0	41.8	-57.6			67.5	572.0	119.7	9.7	1.000015
72500.0	40.8	-57.1			65.8	572.6	120.8	12.1	1.000015
73000.0	39.8	-56.7			64.1	573.2	121.3	13.4	1.000014
73500.0	38.9	-56.4			62.5	573.5	121.6	13.9	1.000014
74000.0	38.0	-56.3			61.0	573.6	121.7	14.7	1.000014
74500.0	37.1	-56.2			59.6	573.8	119.4	19.2	1.000013
75000.0	36.2	-56.1			58.1	573.9	117.9	23.8	1.000013
75500.0	35.4	-56.0			56.7	574.0	115.5	25.2	1.000013
76000.0	34.5	-55.9			55.4	574.2	112.5	27.1	1.000012
76500.0	33.7	-55.8			54.1	574.3			1.000012
77000.0	32.9	-55.7			52.8	574.4			1.000012
77500.0	32.2	-55.6			51.5	574.6			1.000011
78000.0	31.4	-55.5			50.3	574.7			1.000011
78500.0	30.7	-55.4			49.1	574.8			1.000011

STATION ALTITUDE 6331.86 FEET MSL
2 MAY 80 0800 MDT
ASCENSION NO. 3

MANDATORY LEVELS
12303500U3
RED RIO

GEODETIC COORDINATES
33.77850 LAT DEG
106.24993 LON DEG

TABLE 4

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
800.0	6678.	7.6	1.1	63.	354.2	5.6
750.0	8418.	5.5	-2.7	55.	231.8	4.7
700.0	10264.	.9	-6.0	60.	244.3	3.1
650.0	12194.	-3.6	-9.6	63.	293.9	6.5
600.0	14251.	-9.2	-10.4	91.	319.8	10.5
550.0	16446.	-12.4	-30.5	20.	312.9	10.3
500.0	18816.	-16.7	-35.3	18.	308.0	15.3
450.0	21388.	-21.8	-39.6	18.	310.4	22.2
400.0	24205.	-27.5	-44.4	18.	300.2	32.5
350.0	27308.	-35.2	-44.2	39.	303.5	47.5
300.0	30771.	-43.3	-47.3	64.	296.5	71.4
250.0	34741.	-49.2			297.3	114.6
200.0	39533.	-49.5			302.5	102.2
175.0	42397.	-50.9			303.3	89.0
150.0	45646.	-50.7			300.6	85.3
125.0	49405.	-59.3			299.6	66.4
100.0	53962.	-62.2			310.5	20.0
80.0	58503.	-61.3			298.6	7.4
70.0	61220.	-61.6			138.8	5.2
60.0	64339.	-63.6			96.2	22.6
50.0	68031.	-60.8			110.9	23.5
40.0	72628.	-56.8			121.3	13.3

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
2 MAY 80 0830 MDT
ASCENSION NO. 130

SIGNIFICANT LEVEL DATA
123003013O
JALLEN

GEODETIC COORDINATES
35.16712 LAT DEG
106.49511 LON DEG

TABLE 5

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	DEWPOINT	REL.HUM. PERCENT
879.6	4051.0	14.0	4.6	53.0
869.4	4373.4	12.5	2.7	51.0
850.0	4992.8	10.2	1.1	53.0
808.6	6354.7	8.9	.4	55.0
789.0	7021.2	7.9	-.6	55.0
711.4	9800.7	2.4	-4.3	61.0
700.0	10228.7	.7	-5.3	64.0
655.6	11947.4	-3.0	-10.1	58.0
610.8	13774.0	-8.0	-11.3	77.0
602.0	14144.3	-9.0	-13.1	72.0
593.2	14519.4	-8.6	-20.0	39.0
584.4	14900.6	-8.3	-26.7	21.0
541.0	16852.1	-12.9	-28.7	25.0
516.2	18024.3	-14.8	-30.6	24.0
500.0	18815.7	-16.3	-29.4	31.0
483.6	19638.7	-17.8	-28.3	39.0
460.2	20849.5	-21.8	-34.0	32.0
444.8	21673.9	-21.8	-37.3	23.0
430.0	22491.1	-23.3	-38.1	24.0
400.0	24217.9	-27.5	-39.1	32.0
386.4	25033.1	-29.8	-37.4	47.0
372.4	25895.9	-31.4	-37.4	55.0
358.8	26757.6	-34.4	-41.7	47.0
330.8	28070.6	-37.0	-44.1	47.0
325.6	28972.7	-38.4	-43.2	60.0
300.0	30807.3	-43.1	-49.1	51.0
250.0	34903.0	-48.8		
237.6	35899.9	-50.5		
227.2	36860.8	-50.7		
222.0	37359.4	-49.2		
200.0	39616.7	-48.8		
192.6	40430.6	-50.1		
170.2	43033.7	-51.6		
150.0	45758.1	-56.2		
123.4	49799.3	-61.4		
106.8	52753.6	-61.6		
100.0	54094.0	-63.0		
94.6	55219.4	-63.8		
88.6	56553.9	-61.1		
75.0	59946.8	-64.0		

STATION ALTITUDE 4051.00 FEET MSL
2 MAY 80 0830 MDT
ASCENSION NO. 130

SIGNIFICANTL LEVEL DATA
1230030130
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 5 (continued)

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
70.0	61349.2	-61.9		
55.4	66094.0	-65.0		
50.0	68174.9	-61.9		
43.8	70907.3	-57.9		
39.4	73114.9	-57.6		

STATION ALTITUDE 9051.00 FEET MSL
2 MAY 80 0830 MDT
ASCENSION NO. 150

UPPER AIR DATA
123003015O
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.45511 LON DEG

TABLE 6

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
9051.0	879.6	14.0	4.6	53.0	1063.2	661.4	30.0	4.1	1.000276
9500.0	865.4	12.0	2.3	51.4	1053.8	656.9	28.6	4.5	1.000268
10000.0	849.8	10.2	1.1	53.0	1041.7	656.7	27.3	5.1	1.000263
10500.0	834.3	9.7	.8	53.7	1024.5	656.2	26.2	5.6	1.000259
11000.0	819.2	9.2	.5	54.5	1007.6	655.6	29.7	4.9	1.000255
11500.0	804.3	8.7	.2	55.0	991.3	655.0	05.8	2.1	1.000250
12000.0	789.6	7.9	-.5	55.0	975.9	654.1	140.7	2.7	1.000246
12500.0	775.1	7.0	-1.2	56.0	961.3	653.9	161.6	4.9	1.000241
13000.0	760.8	6.0	-1.9	57.1	947.0	651.7	153.9	4.8	1.000237
13500.0	746.7	5.0	-2.5	58.2	932.9	650.5	147.4	4.7	1.000233
14000.0	732.9	4.0	-3.2	59.3	919.0	649.4	155.6	4.9	1.000229
14500.0	719.4	3.0	-3.9	60.4	905.4	648.2	170.3	4.5	1.000224
15000.0	706.1	1.6	-4.8	62.4	893.2	646.5	199.6	4.2	1.000220
15500.0	692.8	.1	-6.1	63.1	881.3	644.7	247.3	5.0	1.000216
16000.0	679.7	-1.0	-7.4	61.3	868.3	643.4	274.4	8.1	1.000211
16500.0	666.9	-2.0	-8.8	59.6	855.4	642.0	279.0	11.4	1.000207
17000.0	654.3	-3.1	-10.1	58.5	842.8	640.7	270.1	13.7	1.000202
17500.0	641.7	-4.5	-10.3	63.7	830.6	639.0	255.6	14.6	1.000200
18000.0	629.4	-5.9	-10.6	68.9	819.0	637.4	255.3	15.9	1.000197
18500.0	617.3	-7.2	-11.0	74.1	807.5	635.8	260.6	17.2	1.000194
19000.0	605.4	-8.6	-12.4	73.9	796.1	634.1	266.6	19.6	1.000190
19500.0	593.7	-8.6	-19.5	40.7	781.2	633.9	269.2	21.6	1.000181
20000.0	582.1	-8.5	-26.8	21.2	766.0	633.9	268.2	20.8	1.000174
20500.0	570.7	-9.7	-27.3	22.2	754.4	632.4	268.2	18.6	1.000172
21000.0	559.5	-10.9	-27.8	23.3	742.9	631.0	270.9	15.6	1.000169
21500.0	548.6	-12.1	-28.3	24.3	731.7	629.6	274.6	14.6	1.000166
22000.0	537.8	-13.1	-29.0	24.9	720.3	628.3	268.9	14.2	1.000164
22500.0	527.1	-14.0	-29.9	24.4	708.2	627.3	259.8	15.5	1.000161
23000.0	516.7	-14.8	-30.8	24.0	696.4	626.3	253.2	17.1	1.000158
23500.0	506.4	-15.7	-29.9	28.2	685.0	625.2	249.8	18.6	1.000155
24000.0	496.3	-16.6	-29.1	32.8	673.7	624.1	248.3	20.1	1.000153
24500.0	486.3	-17.5	-28.5	37.7	662.5	623.0	247.8	20.8	1.000151
25000.0	476.5	-19.0	-30.0	36.9	652.9	621.2	248.0	19.5	1.000148
25500.0	466.8	-20.6	-32.3	34.0	643.9	619.2	247.3	17.6	1.000146
26000.0	457.3	-21.8	-34.5	30.4	633.7	617.7	241.7	17.1	1.000143
26500.0	448.0	-21.8	-36.5	24.9	620.6	617.7	240.6	17.0	1.000140
27000.0	438.8	-22.4	-37.6	23.4	609.5	617.0	251.6	18.7	1.000137
27500.0	429.8	-23.3	-38.1	24.0	599.5	615.8	263.4	20.7	1.000135
28000.0	420.9	-24.5	-38.3	26.4	589.7	614.3	264.3	23.1	1.000133
28500.0	412.2	-25.8	-38.6	28.7	580.3	612.8	264.9	25.7	1.000131

STATION ALTITUDE 4051.00 FEET MSL
2 MAY 80 0830 MDT
ASCENSION NO. 130

UPPER AIR DATA
1230030130
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 6 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	403.7	-27.0	-38.9	31.0	571.1	611.3	255.3	28.3	1.000128
24500.0	395.2	-28.3	-38.3	37.2	562.2	609.7	255.3	30.0	1.000127
25000.0	386.9	-29.7	-37.5	46.4	553.6	607.9	255.4	31.4	1.000125
25500.0	378.8	-30.7	-37.4	51.3	544.0	606.7	256.0	31.0	1.000123
26000.0	370.7	-31.8	-37.9	54.0	534.9	605.3	256.0	31.1	1.000121
26500.0	362.8	-33.5	-40.4	49.4	527.3	603.1	254.6	32.2	1.000119
27000.0	355.0	-34.9	-42.2	47.0	519.0	601.4	253.5	34.3	1.000117
27500.0	347.4	-35.9	-43.1	47.0	509.9	600.1	252.2	37.6	1.000114
28000.0	339.8	-36.9	-44.0	47.0	501.0	598.9	251.4	40.1	1.000112
28500.0	332.5	-37.7	-43.6	53.2	491.7	597.9	250.9	41.0	1.000110
29000.0	325.2	-38.5	-43.3	59.9	482.7	596.9	249.9	44.1	1.000108
29500.0	318.0	-39.8	-44.9	57.4	474.6	595.2	248.8	46.7	1.000106
30000.0	311.0	-41.0	-46.5	55.0	466.7	593.6	248.5	49.3	1.000105
30500.0	304.1	-42.3	-48.1	52.5	459.0	591.9	248.8	51.9	1.000103
31000.0	297.4	-43.4	-49.8	48.5**	450.6	590.6	249.8	55.8	1.000101
31500.0	290.7	-44.1	-51.6	42.2**	442.0	589.6	250.9	60.1	1.000099
32000.0	284.1	-44.8	-53.7	35.8**	433.4	588.7	251.7	65.7	1.000097
32500.0	277.7	-45.5	-55.9	29.4**	425.0	587.8	252.3	71.3	1.000095
33000.0	271.4	-46.2	-58.5	23.0**	416.7	586.9	252.5	74.3	1.000093
33500.0	265.3	-46.9	-61.6	16.6**	408.6	585.9	252.7	76.3	1.000091
34000.0	259.3	-47.7	-65.7	10.3**	400.6	585.0	252.9	75.0	1.000089
34500.0	253.5	-48.4	-73.0	3.9**	392.8	584.1	252.9	73.3	1.000088
35000.0	247.7	-49.1			385.2	583.1	252.6	71.3	1.000086
35500.0	242.0	-49.9			377.7	582.1	251.6	70.0	1.000084
36000.0	236.5	-50.5			370.1	581.3	250.4	69.7	1.000082
36500.0	231.1	-50.6			361.7	581.1	249.9	69.9	1.000081
37000.0	225.7	-50.3			352.6	581.0	251.3	70.9	1.000079
37500.0	220.6	-49.2			343.1	583.0	253.2	70.9	1.000076
38000.0	215.5	-49.1			335.1	583.2	250.2	69.3	1.000075
38500.0	210.6	-49.0			327.3	583.3	250.4	67.2	1.000073
39000.0	205.8	-48.9			319.7	583.4	259.9	64.5	1.000071
39500.0	201.1	-48.8			312.3	583.5	259.3	63.3	1.000070
40000.0	196.5	-49.4			305.9	582.7	257.6	62.7	1.000068
40500.0	192.0	-50.1			299.9	581.8	256.2	61.2	1.000067
41000.0	187.6	-50.4			293.4	581.4	254.5	59.2	1.000065
41500.0	183.2	-50.7			287.0	581.0	253.6	58.2	1.000064
42000.0	179.0	-51.0			280.7	580.7	253.6	58.4	1.000063
42500.0	174.9	-51.3			274.6	580.3	253.8	58.2	1.000061
43000.0	170.9	-51.6			268.6	579.9	254.4	57.2	1.000060
43500.0	166.9	-52.3			263.3	579.9	255.4	55.9	1.000059

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
2 MAY 80 0830 MDT
ASCENSION NO. 150

UPPER AIR DATA
1230030150
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 6 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	163.0	-53.2			250.1	577.8	257.5	53.6	1.000057
44500.0	159.2	-54.0			253.1	576.7	259.4	52.2	1.000056
45000.0	155.5	-54.9			246.2	575.5	259.7	52.4	1.000055
45500.0	151.8	-55.8			243.3	574.4	260.0	52.6	1.000054
46000.0	148.3	-56.5			238.4	573.4	259.3	51.1	1.000053
46500.0	144.7	-57.2			233.4	572.6	258.5	49.6	1.000052
47000.0	141.3	-57.8			228.5	571.7	258.3	48.6	1.000051
47500.0	137.9	-58.4			223.7	570.8	258.6	47.7	1.000050
48000.0	134.6	-59.1			219.1	570.0	258.5	47.0	1.000049
48500.0	131.4	-59.7			214.5	569.1	258.3	46.5	1.000048
49000.0	128.3	-60.4			210.0	568.3	258.4	45.8	1.000047
49500.0	125.2	-61.0			205.6	567.4	258.6	44.2	1.000046
50000.0	122.2	-61.4			201.0	566.9	259.4	42.7	1.000045
50500.0	119.2	-61.4			196.2	566.8	260.6	40.5	1.000044
51000.0	116.4	-61.5			191.5	566.8	262.3	38.4	1.000043
51500.0	113.6	-61.5			186.9	566.7	264.2	35.8	1.000042
52000.0	110.8	-61.5			182.4	566.7	266.3	33.3	1.000041
52500.0	108.1	-61.6			178.0	566.7	268.5	30.2	1.000040
53000.0	105.5	-61.9			174.0	566.3	270.4	26.6	1.000039
53500.0	103.0	-62.4			170.2	565.8	271.7	23.8	1.000038
54000.0	100.5	-62.9			166.5	564.9	269.7	23.2	1.000037
54500.0	98.0	-63.3			162.7	564.4	267.6	22.5	1.000036
55000.0	95.6	-63.6			159.0	563.9	266.9	20.5	1.000035
55500.0	93.3	-63.2			154.6	564.4	266.2	18.4	1.000034
56000.0	91.0	-62.2			150.4	565.8	265.9	15.5	1.000033
56500.0	88.8	-61.2			146.0	567.2	265.7	12.1	1.000033
57000.0	86.7	-61.5			142.7	566.8	265.0	9.1	1.000032
57500.0	84.6	-61.9			139.5	566.2	264.9	9.3	1.000031
58000.0	82.5	-62.3			136.4	565.6	264.9	9.5	1.000030
58500.0	80.5	-62.8			133.3	565.1	265.1	9.6	1.000030
59000.0	78.6	-63.2			130.4	564.5	265.1	9.5	1.000029
59500.0	76.7	-63.6			127.5	563.9	265.3	9.4	1.000028
60000.0	74.8	-63.9			124.5	563.5	265.1	9.0	1.000028
60500.0	73.0	-63.2			121.1	564.5	264.7	8.7	1.000027
61000.0	71.2	-62.4			117.7	565.5	264.5	8.3	1.000026
61500.0	69.5	-62.0			114.6	566.1	262.1	8.1	1.000026
62000.0	67.8	-62.3			112.0	565.7	260.6	7.8	1.000025
62500.0	66.1	-62.7			109.5	565.2	260.1	7.7	1.000024
63000.0	64.5	-63.0			107.0	564.8	259.6	7.9	1.000024
63500.0	63.0	-63.3			104.5	564.3	259.1	8.4	1.000023

STATION ALTITUDE 4051.00 FEET MSL
2 MAY 68 0830 MDT
ASCENSION NO. 130

UPPER AIR DATA
1230030130
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 6 (continued)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	61.4	-63.6			102.1	563.9	355.7	5.5	1.000023
64500.0	59.9	-64.0			99.8	563.5	15.0	6.6	1.000022
65000.0	58.5	-64.3			97.5	563.0	21.4	6.5	1.000022
65500.0	57.0	-64.6			95.3	562.6	28.3	6.7	1.000021
66000.0	55.7	-64.9			93.1	562.1	38.7	8.5	1.000021
66500.0	54.3	-64.4			90.6	562.9	45.4	10.5	1.000020
67000.0	53.0	-63.7			88.1	563.9	47.9	11.3	1.000020
67500.0	51.7	-62.9			85.6	564.9	48.9	11.1	1.000019
68000.0	50.4	-62.2			83.3	565.9	48.9	10.3	1.000019
68500.0	49.2	-61.4			81.0	566.9	37.4	5.6	1.000018
69000.0	48.0	-60.7			78.8	567.8	353.1	2.3	1.000018
69500.0	46.9	-60.0			76.6	568.8	202.6	2.3	1.000017
70000.0	45.8	-59.2			74.5	569.8	197.6	.2	1.000017
70500.0	44.7	-58.5			72.5	570.8	114.9	2.3	1.000016
71000.0	43.6	-57.9			70.6	571.8			1.000016
71500.0	42.6	-57.8			68.9	571.7			1.000015
72000.0	41.6	-57.8			67.2	571.6			1.000015
72500.0	40.6	-57.7			65.6	571.9			1.000015
73000.0	39.6	-57.6			64.0	571.9			1.000014

STATION ALTITUDE 4051.00 FEET MSL
2 MAY 80 0830 MDT
ASCENSION NO. 150

MANDATORY LEVELS
12300301.0
JALLEN
TABLE 7

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4989.	10.2	1.1	55.	27.3	5.1
800.0	6640.	8.5	-.0	55.	92.7	1.8
750.0	8382.	5.2	-2.4	58.	146.0	4.6
700.0	10219.	.7	-5.3	54.	218.0	4.2
650.0	12156.	-3.6	-10.2	50.	265.1	13.9
600.0	14213.	-8.9	-14.4	45.	268.7	21.1
550.0	16416.	-11.9	-28.3	24.	274.7	14.7
500.0	18791.	-16.3	-29.4	31.	247.8	19.8
450.0	21361.	-21.8	-36.0	20.	245.0	16.8
400.0	24179.	-27.5	-39.1	32.	255.3	29.0
350.0	27280.	-35.5	-42.8	47.	252.7	30.3
300.0	30749.	-43.1	-49.1	51.	249.3	34.0
250.0	34730.	-48.8			252.7	72.1
200.0	39524.	-48.8			259.0	60.2
175.0	42384.	-51.3			253.8	58.2
150.0	45638.	-56.2			259.6	51.9
125.0	49397.	-61.1			258.6	44.2
100.0	53931.	-63.0			269.4	28.1
80.0	58446.	-62.9			252.2	9.5
76.0	61143.	-61.9			250.4	8.1
60.0	64257.	-63.9			14.4	8.6
50.0	67923.	-61.9			46.9	8.9
40.0	72515.	-57.6				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.